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8. Analysis

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Dynamical entropy and quantum K-systems

The notion of dynamical entropy for automorphisms of C^*-algebras was introduced by Connes, Narnhofer and Thirring. In recent years, some progress in the computation of CNT-entropy in different models was made. Narnhofer and Thirring suggested a quantum version of Kolmogorov systems (K-systems). Such systems are important in commutative theory. We prove that a wide class of quantum models possess the K-property. In particular, a quantum lattice with finite range of intersection and the ideal of Bose and Fermi (even part) gases belong to this class. An uncountable family of pairwise non-conjugate non-Bernoullian K-systems of type III_1 with the same entropy is constructed. S. Neshveyev took part in this research.